From: Schaub, Mike

To: amanda.vincent@la.gov
Subject: FW: DO Journals

Date: Tuesday, November 5, 2019 4:09:00 PM

Attachments: Campbell and Goodman 2004.pdf Secor and Gunderson 1998.pdf

Crocker and Cech 1997.pdf Kahn and Mohead 2010.pdf

Hi Amanda,

Amy Trahan at FWS sent these to me a few weeks ago. Apologies for my delay in getting them to you, I've been working on the TSD for Bayou Chene/Wilson Slough and am now getting back to this. Each article has portions highlighted in yellow by Amy that she deems important for us to consider in the eLMRAP DO criterion re-evaluation. Each highlights impacts of hypoxia (variably defined) on Atlantic and shortnose sturgeon. Russell had actually cited two of these in the previous BE. Russell made the point in the BE that many of these studies were based on lab studies where sturgeon species were placed in tanks under constant conditions with no chance of escape from hypoxic conditions (with the exception of some studies where they allowed for specimens to access the air/water interface at the surface of test tanks), which doesn't necessarily account for natural behavioral responses by sturgeon to migrate to local, more normoxic refugia. But this point may not matter so much since FWS has indicated that they evaluate DO criteria as being the "constant condition" (over time and, maybe across all portions of a waterbody?).

Mike Schaub Water Quality Standards Program Water Division US EPA Region 6-Dallas 214-665-7314

From: Trahan, Amy <amy_trahan@fws.gov> Sent: Friday, October 18, 2019 11:09 AM To: Schaub, Mike <Schaub.Mike@epa.gov>

Subject: DO Journals

Mike,

Please see the attached articles regarding DO impacts on gulf sturgeon.

Thanks, Amy

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